

ABSTRACT

An instrument and method for continuous recirculation of peritoneal dialysate to infuse and drain out the dialysate automatically through catheters implanted in a peritoneal cavity of a human body. The recirculation instrument permits the reuse of protein which is permeated out from a patient's body, as an osmotic agent in peritoneal dialysate, in order to maintain a disinfected recirculating line, and to improve an ultrafiltration rate and clearance of uremic toxin. The recirculation method includes continuously draining the dialysate out of the peritoneal cavity, recirculating the dialysate through a closed line, filtering out a portion of the dialysate through a semipermeable membrane on the way, supplementing a comparable volume of fresh dialysate through a semipermeable membrane having a maximum permeable molecule of up to 5,000 dalton, and returning the dialysate into the peritoneal cavity.